

Evidence in focus

Presentation summary

Lutes W and Fitch D, *SICOT Orthopaedic World Congress (2018)**



Supporting healthcare professionals for over 150 years

JOURNEY[®] II Cruciate Retaining (CR) Knee System demonstrates significantly improved functional outcomes compared to conventional CR total knee arthroplasty (TKA)

These improvements may be attributable to the design of the JOURNEY II CR knee, which is designed to more closely replicate normal knee kinematics



Study overview

- Retrospective comparison of functional outcomes following JOURNEY II CR or conventional CR TKA (P.F.C. Sigma[®] [DePuy Synthes Orthopaedics; Warsaw, IN, USA]) carried out by a single surgeon between September 2012 and June 2014
 - JOURNEY II CR: 52 patients (mean age, 67.3 years)
 - P.F.C. Sigma: 60 patients (mean age, 70.2 years)
- Knee society scores (KSS) and Western Ontario and McMaster Universities Arthritis Index (WOMAC) scores were assessed and compared pre TKA and at 3, 6, 12 and 24 months post TKA
- Range of motion (ROM) was assessed and compared pre TKA and at 3, 6 and 12 months post TKA



Key results

- JOURNEY II CR patients reported significantly improved KSS scores compared to conventional CR TKA at 3 (69.5 vs 63.0; $p=0.016$), 6 (84.4 vs 70.1; $p=0.043$), 12 (93.0 vs 86.1; $p<0.001$) and 24 (96.4 vs 91.7; $p=0.006$) months post TKA (Figure 1)
- JOURNEY II CR patients reported significantly improved WOMAC scores compared to conventional CR TKA at 6 (17.8 vs 24.6; $p=0.018$) and 12 (12.4 vs 18.5; $p=0.008$) months post TKA, differences at other time points were not significant
- JOURNEY II CR patients had a significantly greater change in ROM from baseline compared to conventional CR TKA at 3 (-4.4 vs -10.1; $p<0.05$), 6 (5.8 vs -1.8; $p<0.05$) and 12 (11.4 vs 4; $p<0.05$) months post TKA (Figure 2)

■ JOURNEY II CR ■ Conventional CR * $p<0.05$

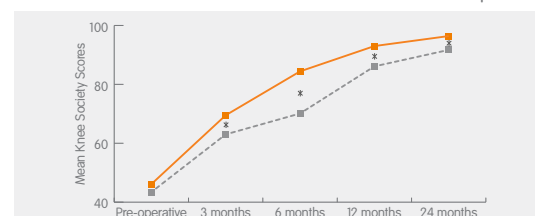


Figure 1. Mean KSS scores of JOURNEY II CR and conventional CR TKA from pre TKA to 24 months post TKA

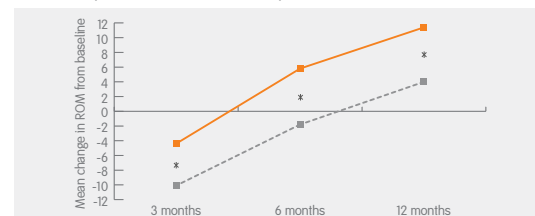


Figure 2. Mean change in ROM from baseline of JOURNEY II CR and conventional CR TKA at 3, 6 and 12 months



Conclusion

JOURNEY II CR demonstrated significant improvements in short-term functional outcomes compared to conventional CR TKA. The results of this study suggest that choosing a knee implant designed to more closely replicate normal knee kinematics may improve patient-reported outcomes, and in turn patient satisfaction, compared to conventional TKA.



Study citation

*Lutes W and Fitch D. Comparison of functional outcomes following total knee arthroplasty with a conventional implant design or one designed to mimic natural knee kinematics. Presented at: 39th SICOT Orthopaedic World Congress; October 10-13, 2018; Montreal, Canada.